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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,341	10/04/2000	Akio Nakashima	2165.8	6755

5514 7590 12/10/2002

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

SUHOL, DMITRY

ART UNIT	PAPER NUMBER
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3712

DATE MAILED: 12/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M.

**Office Action Summary**

Application No.

09/679,341

Applicant(s)

NAKASHIMA ET AL.

Examiner

Dmitry Suhol

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11 and 19-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U.S. Patent No. 6,416,853 in view of Lee, Lenkoff and Kaufmann. The patented and pending claims set forth the same invention of substantially the same scope except the invention of patented claims 1-7 lacks the specifics of a writing member and a container for refilling a writing member as well as specific properties of a water-metachromatic cloth and resin. However the specifics of such a writing member for a water-metachromatic sheet is well known in the art and shown by Lee (32) and Lenkoff (fig. 2). A container member for refilling a writing member is also well known in the art and is shown by Kaufmann (figure 4).

In view of Lee and Lenkoff it would have been obvious to one of ordinary skill in the art to incorporate the specifics of a writing member and container for refilling a writing member in the water-metachromatic toy of claims 1-7. The ranges for the densities of the cloth silicic acid along with the exact amounts of silicic acid per weight would have been obvious for the purpose of providing luster to the water-metachromatic mark especially since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 8, 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5 and 8, the markush terminology is improper.

Regarding claim 12, the water-metachromatic member is not positively claimed but is rather a functional use for a writing instrument. It is unclear if the applicant intends to claim the water-metachromatic member (for purposes of examination, the examiner assumes that a water-metachromatic member is not claimed). It is unclear what element the phrase "...which is capable of rendering...in said binder resin..." is directed toward (i.e. a writing instrument or a water-metachromatic member).

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Regarding claim 13, the structural features encompassed by the phrase "is so constructed as to be internally suppliable with water by absorption from the pen point" can't be determined.

Regarding claim 14, the structural features encompassed by the phrase "is so constructed as to be internally suppliable with water by absorption through the communicating hole at the rear of said main body" can't be determined. There is no antecedent basis for "the communicating hole".

Regarding claim 15, there is no antecedent basis for "the communicating hole".

Regarding claim 18, there is no antecedent basis for "said communicating hole".

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. There is no teaching of a pen point having a capillary force set greater than a capillary force of a water absorber, as required by claim 17, in the specification.

In view of the examples above, the applicant is required to carefully review all of the claims in order to correct those having the same or similar defects but not specifically pointed to.

The remainder of the office action considers the claims as best understood.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Takahara (Japanese Publication number 02-074688). Lee discloses some of the elements of the claims including, a water-metachromatic sheet (24) with a porous layer comprising a binder resin and silicic acid (abstract) as required by claim 1, a colored layer being a lower or an upper layer being in a vicinity of a porous layer as required by claim 3 (col. 2, lines 21-26), a sheet material being provided on a back of a water-metachromatic sheet as required by claim 4 (cols. 2-3, lines 67-68 and 1-2 respectively) is read onto the hard surface of a frame. Lee further teaches that his invention is made of 0.18 mm paper and 0.03 mm coating of silica and resin (col. 2, lines 41-48). The writing means as required by claim 7 is shown in (figs. 1-6). A water

providing means as required by claim 8 are shown in figures 2-3 and 6 and described in column 3, lines 3-32.

Although Lee discloses some of the elements of the claims the reference fails to explicitly teach a water-metachromatic sheet being cloth and having a density of 30 g/m<sup>2</sup> to 1000 g/m<sup>2</sup> and 1 g/m<sup>2</sup> to 30 g/m<sup>2</sup> of silicic acid in a porous layer along with amount of silicic acid being ranging from 0.5 to 2 parts by weight per 1 part by weight of the binder as required by claim 1, silicic acid having a particle diameter of 0.03 μm to 10 μm with a resin being a polyurethane resin as required by claim 2, a sheet material provided on a back of a cloth being water-impermeable as required by claim 4. However, Takahara discloses a water-metachromatic sheet which teaches the use of a cloth substrate (abstract) with a silica particle diameter of 0.03 μm to 10 μm (abstract). Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to use a cloth substrate and silica particles having a diameter of 0.03 μm to 10 μm, as taught by Takahara, for the purpose of interest to the consumer by providing a variety of substrates usable in everyday life, such as a canvas. It would have been further obvious to use a polyurethane resin since the use of such resins are well known in the water-metachromic arts. The ranges for the densities of the cloth silicic acid along with the exact amounts of silicic acid per weight would have been obvious for the purpose of providing luster to the water-metachromatic mark especially since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Takahara (Japanese Publication number 02-074688), as stated above, in view of Green et al '525. Regarding claims 4-5, although Lee, as modified by Takahara, teaches a sheet material being provided on a back of a water-metachromatic sheet, as stated above, the reference fails to explicitly teach that the sheet is water-impermeable as required by claim 4, is made of a material selected from a soft thermoplastic resin and a thermoplastic elastomer with a thickness of 1 $\mu$ m to 3mm as required by claim 5 and a cloth being a quadrilateral having a side of 50cm or longer as required by claim 6. However, Green discloses a kit for making artistic articles which teaches a water-impermeable backing sheet made of a material selected from a soft thermoplastic resin and a thermoplastic elastomer (fig. 1, and col. 5, lines 47+) having a thickness in the range of 1 $\mu$ m to 3mm (col. 6, lines 46-47). Therefore it would have been obvious, in view of Green, to provide the device of Lee, as modified by Takahara, with a backing sheet having the above properties for the purpose of providing an inexpensive, simple in design, sturdy, fun, safe and portable (see Green, col. 3, lines 3-5). It would have been further obvious to make the sheet of Lee, as modified by Takahara, 50cm or longer since write/drawing boards with such a size are well known in the art.

Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Takahara (Japanese Publication number 02-074688), as stated above, in view of Lenkoff. Lee as modified by Takahara discloses most of the elements of the claims,



as stated above, including a means for providing water having hollow main body (fig. 1, element 32) as required by claims 9 and 19, a pen point member formed of a fibrous worked member (col. 3, lines 29-30) read onto a felt tip as required by claim 9, means for communicating air (fig. 1, element 34 and col. 3, lines 6-8) as required by claims 9 and 20.

However Lee, as modified by Takahara, lacks a water absorber held in a hollow interior of a main body as required by claim 9. Lenkoff discloses a means for providing water like that of Lee which teaches a water absorber held in a hollow interior of a main body (figure 1 and col. 1, lines 12-22). Therefore it would have been obvious to provide the water pen of Lee with a water absorber held in a hollow interior of a main body for the purpose of better providing (metering) writing media (water) to a writable sheet.

Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Takahara (Japanese Publication number 02-074688), as stated above, in view of Kaufmann '078. Lee as modified by Takahara discloses most of the elements of the claims, as stated above, including a pen point member having a pen point at a tip end as required by claim 10 (fig. 1, element 32) where the felt tip is the pen point. A holder as required by claim 10 is read onto the body of the pen (32). Lee as modified by Takahara, lacks a container as required by claim 10, however Kaufmann discloses a container for filling writing utensils which teaches filling a pen member by inserting the pen member so that a rear end is exposed to an interior of the container (fig. 4 and col. 7, lines 52-58). Therefore it would have been obvious, in view of Kaufmann, to include a

container for refilling the writing member of Lee (as modified by Takahara) for the purpose of ease of filling a writing member. A gap as required by claim 11 would have been obvious for the purpose of feeding the pen tip with writing fluid through a capillary action especially since such a gap is well known in writing implements that use a capillary system to deliver writing fluids to a writing tip.

Claims 12-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Lenkoff. Lee discloses a writing instrument for a water-metachromatic member, as stated above, but lacks a water absorber. As stated above, Lenkoff discloses a writing instrument like that of Lee, which teaches a water absorber (figure 1 and col. 1, lines 12-22). Therefore it would have been obvious to provide the water pen of Lee with a water absorber held in a hollow interior of a main body for the purpose of better providing (metering) writing media (water) to a writable sheet.

Supplying water to a writing instrument through a pen point, as required by claim 13, is taught by Lee in col. 3, lines 8-9. A hole and stopper in a rear of a main body of a writing member as required by claims 14-15 and 18 is described by Lee in col. 3, lines 6-8.

Claims 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Lenkoff, as stated above, in view of Flye Sainte Marie et al '553. Lee, as modified by Lenkoff, discloses most of the elements of the claims, as stated above, but for a communicating hole provided at a front end of a main body as required by claim

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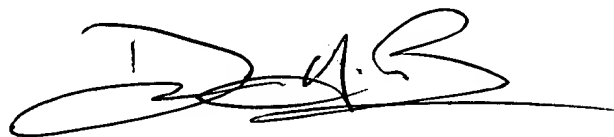
16, a pen point having a capillary force set greater than a capillary force of a water absorber as required by claim 17. However Flye Sainte Marie discloses a writing member, like that of Lee, which teaches a communicating hole provided at a front end of a main body (figure 3, near 11b). It would have been obvious to set a capillary force of a pen point to be greater than a capillary force of an absorber for the purpose of being able to provide writing fluid to the pen tip while at the same time preventing unwanted fluid leaking out, especially since such structure is known in the art.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Suhol whose telephone number is 703-305-0085. The examiner can normally be reached on Mon - Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 703-308-1745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.



**DERRIS H. BANKS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3700**

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December 6, 2002